

### **Remarks**

Claims 1-20 are pending in this application. By this Amendment, claims 1, 9, and 14 have been amended. After entry of this Amendment, claims 1-20 will remain pending. Reconsideration in view of the above amendments to the claims and the following remarks is respectfully requested.

### **Rejection of Claims 1-20 Under § 103**

Claims 1-20 stand rejected under 35 U.S.C. § 103(a) as allegedly being obvious over U.S. Patent No. 6,621,827 ("Rezvani"). This rejection is respectfully traversed.

Claim 1 recites an apparatus for adaptive polling of a monitored system comprising "a poll receiving module configured to receive a polling signal from a polling system," "an event prediction module," and "a next polling time determination module." As amended, the polling signal comprises "a request for information regarding a monitored operation being executed by the monitored system." As further amended, the event prediction module is configured "to predict when an operation-related event of the monitored operation will occur in the monitored system before the operation-related event occurs." The next polling time determination module then determines "a next polling time based on the prediction of when the operation-related event will occur in the monitored system before the operation-related event occurs." Support for the amendments to claim 1 can be found in at least paragraphs 6, 33, 38 of the present application.

As discussed in more detail below, Rezvani does not render obvious the features of claim 1 for at least the following reasons (1) predicting in advance when a operation-related event will occur in a monitored system before the operation-related event occurs is not obvious in view of a result of a determination of an event after it occurs; (2) Rezvani does not teach the next polling time is based on the result of the determination of the alleged events listed in the Office Action; and (3) the alleged events listed in the Office Action are not operation-related events of a monitored operation that is "being executed by the monitored system."

Rezvani appears to describe a “method for transferring data from a data source to a service broker.” Rezvani, column 4, lines 37-38. The service broker (e.g., monitoring module) polls the data source (e.g., control server) for data where “the polling frequency is adaptively determined.” *Id.* at lines 48-50. The monitoring module serves as the “connection hub” between controlled or connected devices and the control server. *Id.* at column 9, lines 25-26. The monitoring module maintains knowledge of the current state of the connected devices by “stor[ing] the persistent state of the connected devices 32” and “updating the state of each connected device 32.” *Id.* at column 9, lines 53-59. The monitoring module also “obtain[s] commands from the server 14” by “polling 50 the server 14.” *Id.* at lines 59-61. The commands are issued by the control server for execution by the controlled devices and stored in a command queue of the control server. *Id.* at column 10, lines 8-12. The monitoring module “polls 50 by scheduling a transmission between the monitoring module 28 and the server 14 in which it checks for commands from the server 14.” *Id.* at lines 62-65. If commands are stored in the command queue of the server, “the server will return commands in an algorithmic manner” for processing by the monitoring module and “informs the monitoring module that N commands are waiting in the queue.” *Id.* at column 9, line 65 to column 10, line 1. The monitoring module continues to poll the server “until there are no more commands in the queue.” *Id.* at column 10, lines 1-4. After receiving the commands from the server, the monitoring module “effects changes in the devices 32” according to the commands. *Id.* at lines 4-7 and 18-23. In addition to maintaining the polling operations and “sending and receiving events, data, and commands 54 to and from the server 14,” the monitoring module can also take care of “many network level activities 56, such as verifying passwords, dialing up the ISP if necessary, periodically uploading accounting/billing information, and performing security measures.” *Id.* at lines 54-60.

According to the Office Action, Rezvani “disclosed that the next polling time was based on the result of the determination of these events: ‘state of each connected devices’, ‘checks for commands from server’, ‘N-commands are waiting in the queue’, ‘effect changes’, ‘interval

change', 'heart beat interval', 'events data', 'network level activities', etc.” Office Action Page 3. However, the Office Action recognizes that Rezvani does not “explicitly mention that the next polling time was based on the prediction of when the operation-related event will occur in the monitored system.” *Id.* Notwithstanding the recognized shortcoming of Rezvani, the Office Action contends that it would have been obvious to “recognize that the result of the determination of the [above-listed] events would have been a prediction of the events to the extent of the claim language.” In other words, the Office Action alleges that a prediction of when an event will occur is obvious in view of a teaching of a result of the determination of the event. Applicant respectfully disagrees with the Office Action’s contentions.

Determining the result of an event does not render obvious a prediction of when the event will occur. As commonly used in the art, to predict when an event will occur means to indicate in advance when the event occurs. See Merriam-Webster Online Dictionary, *at* <http://www.merriam-webster.com/dictionary/predicted> (last visited December 1, 2008). Accordingly, in the context of the claims, a prediction of “when an operation-related event of the monitored operation will occur” means an indication in advance of when the operation-related event will occur. To emphasize the meaning of prediction as used in the claims, claim 1 has been amended to recite a prediction of when an operation-related event of the monitored operation will occur in the monitored system “before the operation-related event occurs.”

Claim 1 as amended clearly distinguishes the teachings of Rezvani because Rezvani only teaches utilizing the results of a determination of an alleged event that has already occurred. The Rezvani method does not predict in advance when the “events” listed in the Office Action will occur, e.g., begin or end, and does not use the prediction to determine a next polling time. Utilizing a prediction of when an event will occur to determine a next polling time reduces the polling interval adjustment lag associated with changing the polling interval only after an event has completed as is common in prior art systems. See present application, page 2, paragraph 5. Because the Rezvani method is based on the result of a determination of an alleged event only

after the event is completed, it suffers from the same shortcomings of the prior art described in the present application.

Based on the foregoing, a result of a determination of a concluded event is not the same as, is not equivalent to, does not solve the same problems as, or is not suggestive of a prediction of when an event of an ongoing operation occurs before the event actually occurs. Therefore, predicting in advance when a operation-related event will occur in a monitored system before the operation-related event occurs as recited in claim 1 is not obvious in view of a result of a determination of an event after it occurs as allegedly taught by Rezvani.

Further, assuming, without concession, that Rezvani discloses the alleged events listed in the Office Action, which it does not for various reasons, Rezvani does not teach the next polling time is based on the result of the determination of these events. Rezvani only mentions that the polling time is associated with a scheduled transmission and that the polling interval can be changed. Nowhere does Rezvani teach that the polling interval is changed based on a result of a determination of the above-listed events.

Additionally, the alleged events of Rezvani listed by the Office Action are not operation-related events of a monitored operation that is “being executed by the monitored system” as recited in claim 1. The alleged monitored system in Rezvani is the server 14. The listed events are not operations being executed by the server 14. Rather, the listed events are simply parameters, characteristics, and results of the system (e.g., state of each connected device, N-commands waiting in the queue, heart beat interval) or operations performed by the monitoring module (e.g., checks for commands from server, effects changes, sends and receives events, sends and receives data, and takes care of network level activities). Any other operations discussed in Rezvani are associated with user-implemented requests and activities, and not operations executing on the server.

For at least the above reasons, Rezvani does not render obvious the combination of features recited in claim 1. Therefore, withdrawal of the rejection of claim 1 is respectfully requested.

Independent claims 9 and 14 have been amended to recite features analogous to the amended features of claim 1 discussed in detail above. Accordingly, for at least similar reasons to those discussed above in favor of withdrawing the § 103 rejection of claim 1, Rezvani does not render obvious the subject matter of claims 9 and 14. Therefore, withdrawal of the § 103 rejection of claims 9 and 14 is respectfully requested.

Claims 2-8, 10-13, and 15-20, being dependent on respective base claims 1, 9, and 14, are allowable for at least the same reasons as for the respective base claims. Therefore, withdrawal of the rejection of claims 2-8, 10-13, and 15-20 is respectfully requested.

Claims 2-8, 10-13, and 15-20 are also allowable for the respective additional features recited therein. For example, claim 5 recites “a polling adjustment module in the polling system configured to adjust the next polling time.” Rezvani teaches only that the monitored system, i.e., server 14, requests and makes adjustments to the polling time interval by sending requests to the polling system, i.e., monitoring module. Rezvani states that if the server “desires to make an internal change” to the monitoring module, such as “modifying the polling 50” time intervals, the control server is capable of sending unsolicited commands to the monitoring module. *Id.* at lines 12-16 and 38-44. The monitoring module then effects the requested changes to the polling time interval. *Id.* at lines 21-23. Rezvani does not teach that the monitoring module is capable of changing or adjusting the requested polling time interval received from the server. Accordingly, Rezvani does not render obvious the feature “a polling adjustment module in the polling system configured to adjust the next polling time” communicated from the “polling response module” of the monitored system as recited in claim 5. For this reason, withdrawal of the rejection of claim 5 is respectfully requested. Withdrawal of the rejection of claims 2-4, 6-8, 10-13, and 15-20, also is respectfully requested because of the respective additional features recited therein.

### Conclusion

Based on the foregoing, Applicant respectfully submits that the current claims are drawn to allowable subject matter and that the application is in condition for allowance. Should the Examiner believe that anything further, such as amendments to the claims, is necessary to place this application in better condition for allowance, the Examiner is requested to contact Applicant's representative by telephone.

Respectfully submitted,

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